

an auto-antigen to which the patient's antigen-specific T cells respond, said all or a portion of an auto-antigen being functionally connected to a signal peptide and a transmembrane/cytoplasmic tail, whereby said all or a portion of auto-antigen is processed by endosomes.

58. (Amended) A virus which infects human APCs and which comprises a polynucleotide which encodes all or a portion of an auto-antigen to which an auto-immune disease patient's antigen-specific T cells responds.

#### REMARKS

##### The Invention

The invention is drawn to a method of ablating auto-antigen-specific T cells in an autoimmune disease patient. Antigen presenting cells (APCs) are removed from an autoimmune disease patient. A polynucleotide that encodes all or a portion of an auto-antigen to which the patient's antigen-specific T cells respond is transferred into the APCs. The APCs are reintroduced into the patient, activating the auto-antigen specific T cells. A product is administered to the patient that is detrimental to activated T cell proliferation. (Claim 41.)

The invention is also drawn to APCs of an autoimmune disease patient that are transduced or transfected with a polynucleotide. The polynucleotide encodes a protein comprising all or a portion of an auto-antigen to which the patient's antigen-specific T cell respond. The auto-antigen or portion of the auto-antigen is functionally connected to a signal